

EH6500 Series
Environmental
Enclosure

Installation/
Operation Manual

C459M-E (1/96)

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1.0 WARNINGS	1
2.0 SCOPE	2
3.0 DESCRIPTION	2
4.0 INSTALLATION	3
4.1 BLOWER AND HEATER ELECTRICAL CONNECTION (IF APPLICABLE)	3
4.2 INSTALLATION OF CAMERA/LENS	6
4.3 ENCLOSURE MOUNTING - PAN/TILT	7
4.4 SUN SHROUD ASSEMBLY INSTALLATION (OPTIONAL)	8
4.5 WW6500 WINDOW WASHER ASSEMBLY INSTALLATION (OPTIONAL)	8
5.0 CARE AND MAINTENANCE	9
6.0 WW6500 EXPLODED ASSEMBLY DIAGRAM	9
7.0 WW6500 MECHANICAL PARTS LIST	10
8.0 MODELS	11
8.1 OPTIONAL ACCESSORIES	11
8.2 RECOMMENDED MOUNTS	11
8.3 RECOMMENDED CABLE SIZE	11
8.4 POWER REQUIREMENTS FOR BLOWER, HEATER AND ACCESSORIES	11
9.0 SPECIFICATIONS	11
10.0 WARRANTY AND RETURN INFORMATION	12

LIST OF ILLUSTRATIONS

<u>Figure</u>		<u>Page</u>
1	EH6500 Series Enclosure Dimension Drawing	2
2	Wiring Diagram for Blower and Heater, 120V	3
3	Wiring Diagram for Blower and Heater, 230V	4
5	Enclosure with Pan/Tilt and WM2000 Wall Mount with ST1 Strut	7
6	EH6500 Enclosure with Pan/Tilt and PM2000 Pedestal/Ceiling Mount	7
7	Sun Shroud Assembly Diagram	8
8	WW6500 Exploded View Assembly Diagram	9

REVISION HISTORY

Manual #	Date	Comments
C459M	5/90	Original manual release.
C459M	2/91	Revision A. Manual revised to include corrected blower, heater, and wiper motor wiring diagram.
C459M	7/91	Revision B. Manual revised to include new blower and heater wiring diagram, and upgraded manual design.
C459M	10/92	Revision C. Revised blower and heater wiring diagram.
C459M-D	1/95	Revision D. Revised manual to include updated wiring diagrams as per ECO# 94-105.
C459M-E	1/96	Revision E. Revised manual per ECO 95-431 to include new style wiper/washer pump. See Section 6.0 and 7.0.

(This page intentionally left blank.)

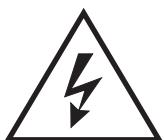
INSTALLATION/OPERATION MANUAL
MODEL EH6500 SERIES
ENVIRONMENTAL ENCLOSURE

1.0 WARNINGS

Prior to installation and use of this product, the following WARNINGS should be observed.

1. Installation and servicing should only be done by Qualified Service Personnel and conform to all Local codes.
2. Unless the unit is specifically marked as a NEMA Type 3, 3R, 35, 4, 4X, 6 or 6P enclosure, it is designed for Indoor use only and it must not be installed where exposed to rain and moisture.
3. The product may bear the following marks:

This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.



CAUTION:
TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

4. Only use replacement parts recommended by Pelco.
5. After replacement/repair of this unit's electrical components, conduct a resistance measurement between line and exposed parts to verify the exposed parts have not been connected to line circuitry.

This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.



CAUTION:
RISK OF ELECTRIC SHOCK.
DO NOT OPEN.

Please thoroughly familiarize yourself with the information in this manual prior to installation and operation.

2.0 SCOPE

The information contained within this manual covers the EH6500 Series Environmental Enclosure.

Installation should be in accordance with all applicable local and national electric codes, utilizing approved materials only.

Please thoroughly familiarize yourself with the information in this manual prior to installation and operation.

3.0 DESCRIPTION

The EH6500 Series offers an environmental enclosure designed to accept ENG (Electronic News Gathering) cameras which are used in a variety of applications. The enclosure is constructed of 5052H32 aluminum and opens from the rear by releasing the two latches. Opening is assisted by dual gas springs, which securely holds the lid when fully opened. If necessary, the lid can be removed. The forward opening lid allows for maximum accessibility for installation and camera/lens adjustments. An adjustable camera sled has a built-in elevation block that is removable and can be inverted depending on the camera/lens utilized.

The EH6500 Series is available with a full complement of factory and field installed accessories which include a sun shroud, window wiper/defroster, lock kit, and thermal insulation. Heater and blower are standard features.

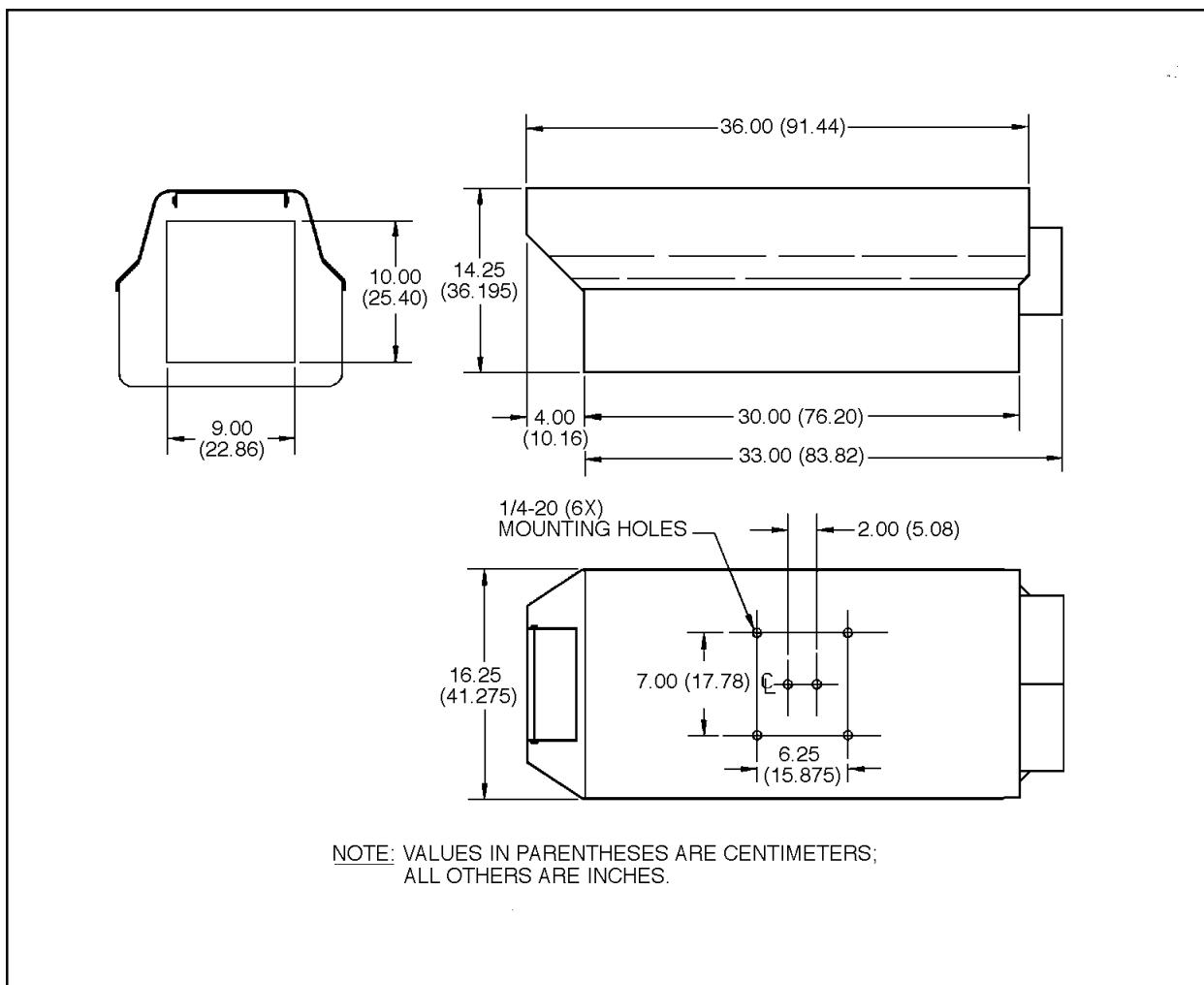


Figure 1. EH6500 Series Enclosure Dimension Drawing

4.0 INSTALLATION

4.1 BLOWER AND HEATER ELECTRICAL CONNECTION (IF APPLICABLE)

The heater and blower assemblies are factory pre-wired for power input and only require connection of power to the terminal block. Refer to Figure 2, 3 or 4 for the proper connections.

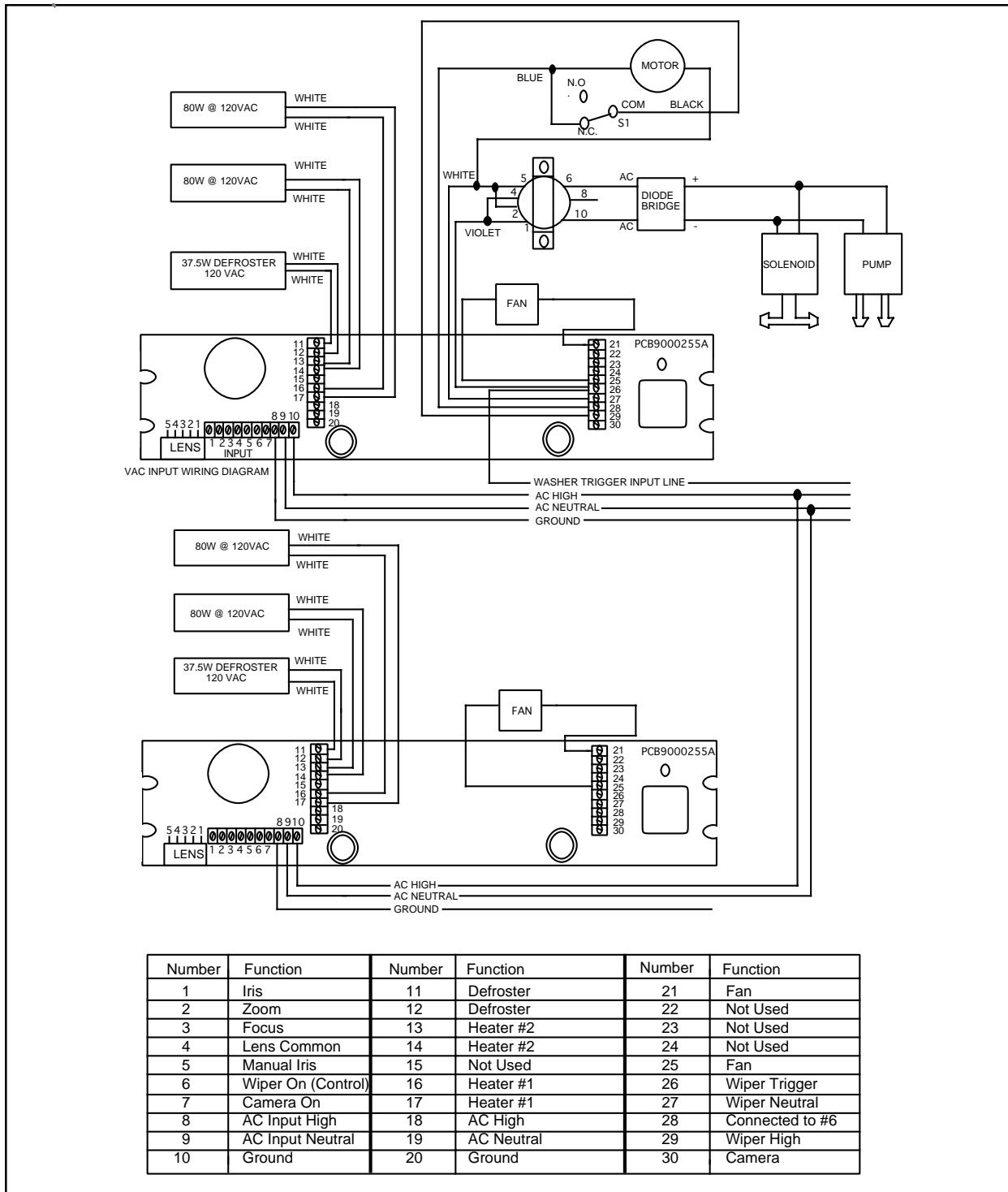


Figure 2. Wiring Diagram for Blower and Heater, 120V

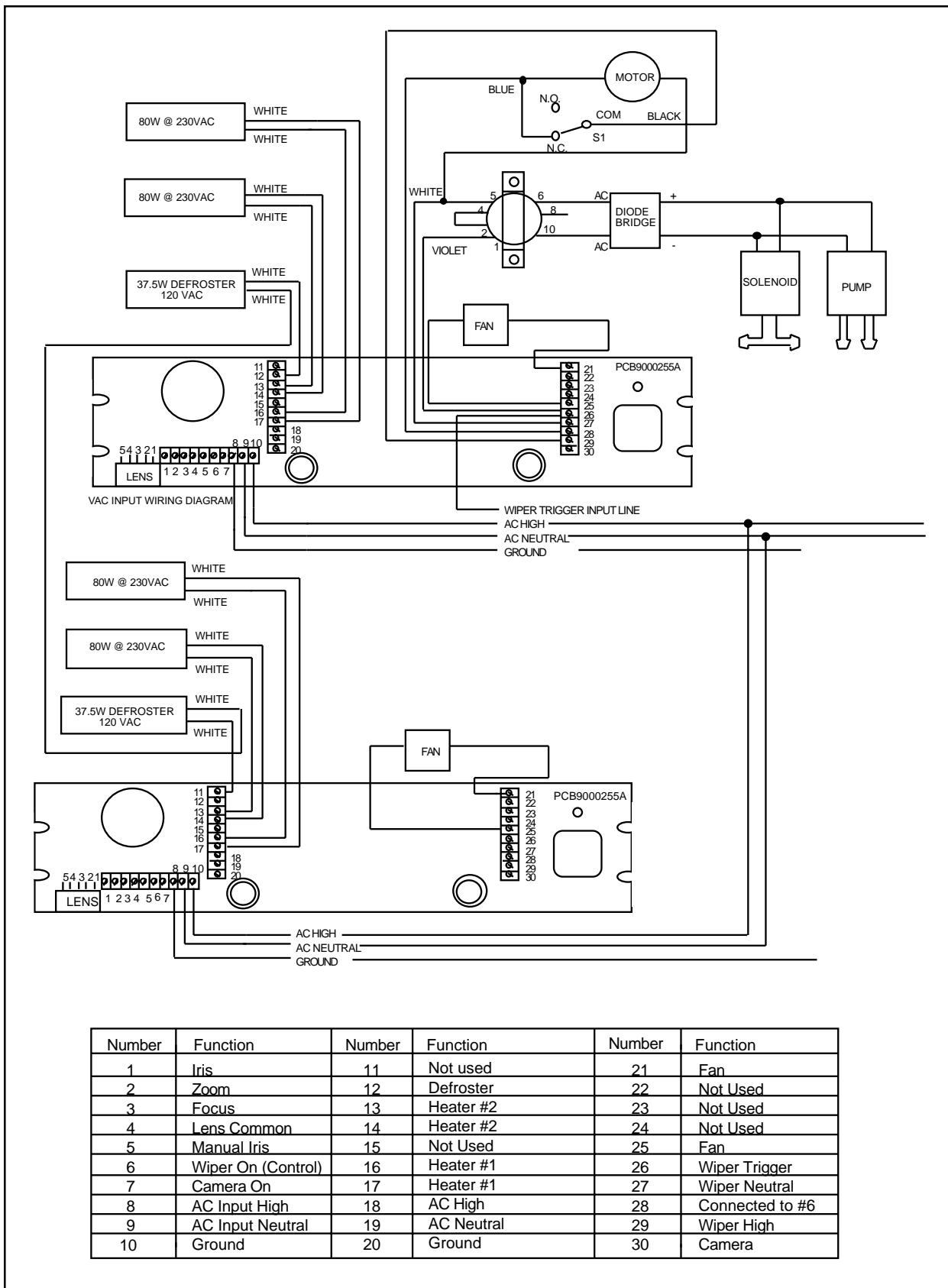


Figure 3. Wiring Diagram for Blower and Heater, 230V

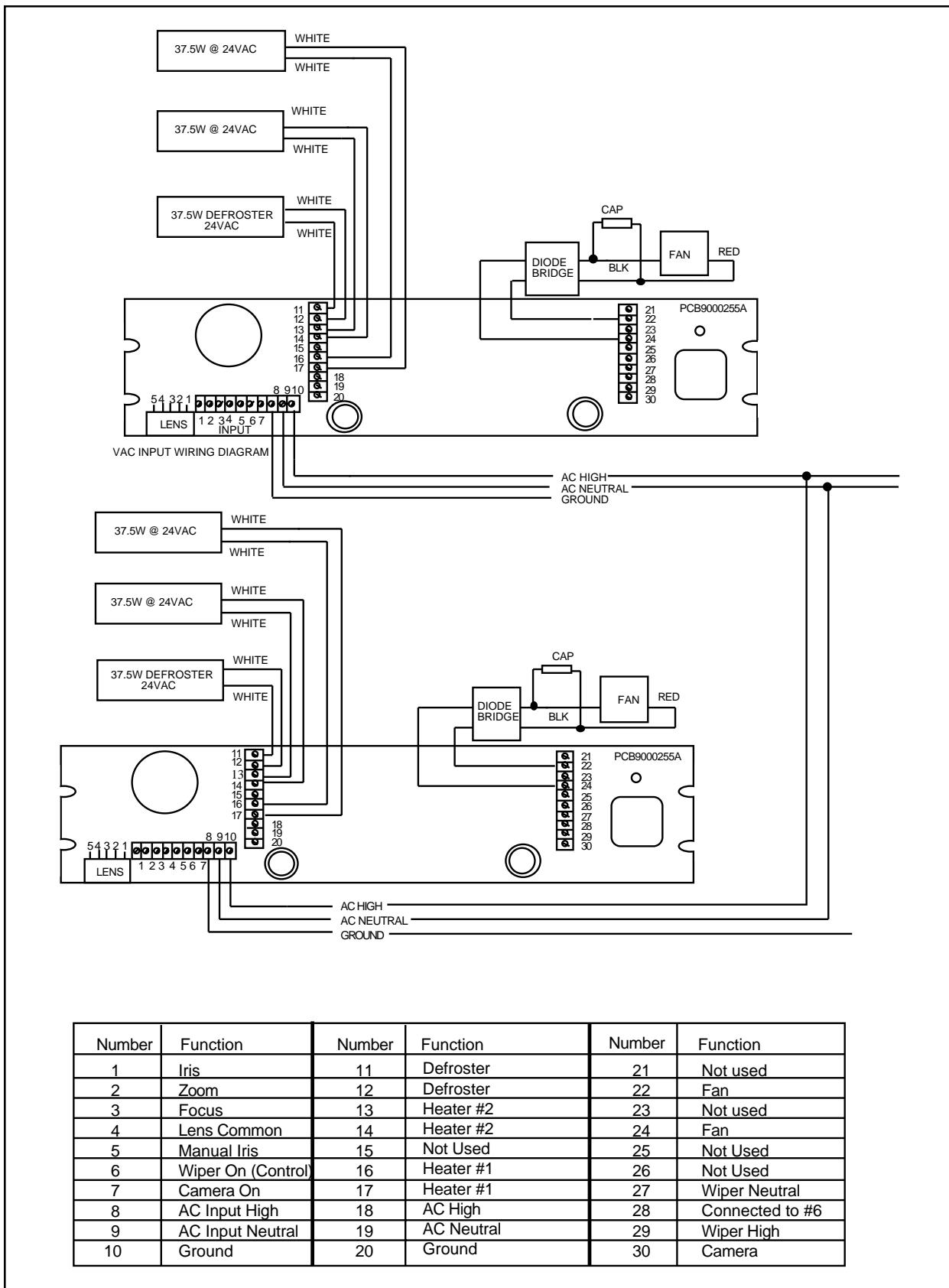


Figure 4. Wiring Diagram for Blower and Heater, 24V

4.2 INSTALLATION OF CAMERA/LENS

To install the camera/lens, perform the following steps:

1. Open the lid by releasing the two latches at the rear of the enclosure. The gas springs will securely hold the lid in place when fully opened. If necessary, the lid can be removed.
2. Remove the camera sled from the rail by loosening the two Phillips head screws and sliding the sled to the rear. Attach the camera/lens with the 1/4-20 Phillips head screws provided.

NOTE: For cameras with low optical center line or using a large diameter lens, remove and invert the camera sled for proper positioning.

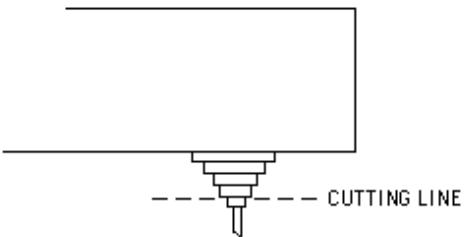
3. Replace the camera/sled assembly onto the rail and slide along the rail to adjust the camera to maximum forward camera position; lock into place by tightening the Phillips head screws.

IMPORTANT: Set the focus for the shortest distance to extend the lens to the maximum length before positioning the camera/lens combinations. This will ensure that the lens has enough clearance and will not come in contact with the window during focusing.

4. Route the camera cables through the cable entry boot and connect to the camera. Wire the enclosure according to the wiring diagram provided (see Figure 2). Depending on the size of the cable bundle coming into the enclosure, the cable entry boot can be modified in the field. Horizontally cut the cable entry boot one lip at a time until you have an adequate opening.

NOTE: For shipping purposes the cable entry boot is positioned inside the enclosure. Remove and reinstall the boot as shown.

Conduit knock-outs (1/2"-3/4") have been provided in the bottom of the enclosure. When using conduit, plug the remaining holes with the hole plugs provided.



5. Replace and/or close the lid and secure the latches.
6. Attach the enclosure to the appropriate mount or pan and tilt using the instructions provided with the mounting equipment.

4.3 ENCLOSURE MOUNTING - PAN/TILT

The EH6500 Series Enclosure can be mounted to a pan/tilt assembly in addition to a wall or pedestal/ceiling mount.

To include the pan/tilt assembly in your configuration, perform the following steps:

1. Select the appropriate mount (WM2000 with ST1 strut for wall mounting, PM2000/PM2010 for pedestal mounting) for the application.

NOTE: For maximum stability, use two (2) ST1 struts.

2. Select the appropriate pan/tilt for the application. Considerations must be made as to enclosure options, camera and lens selection, and environmental conditions. All of these will affect the pan/tilt selection.

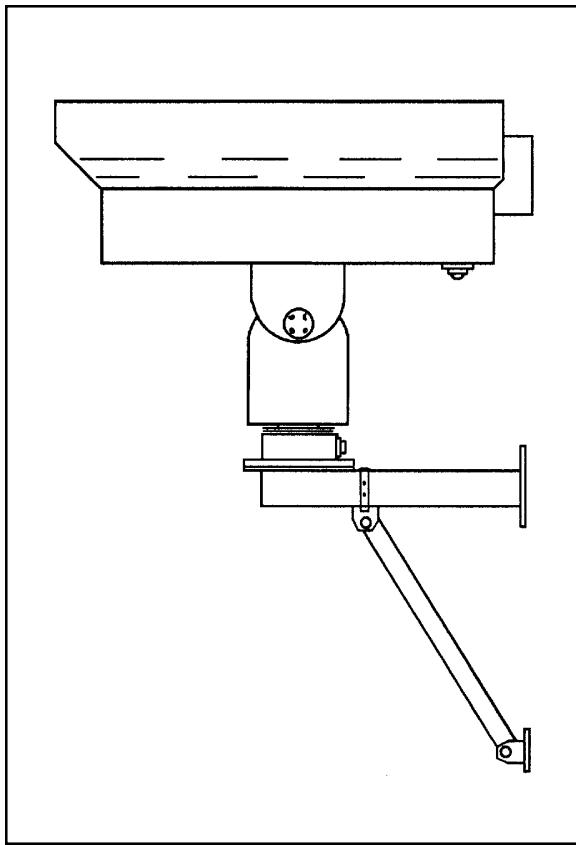


Figure 5. Enclosure with Pan/Tilt and WM2000 Wall Mount with ST1 Strut

3. Secure the mount to a suitable load bearing surface. Use fasteners with a minimum 1/4-inch diameter.
4. Attach the pan/tilt to the mount. The pan/tilt control connector should be positioned towards the building/mounting location. Note the "front" label on the pan/tilt.
5. Install the camera/lens according to the instructions in paragraph 4.2 of this manual.
6. Balance the enclosure/camera/lens load on the tilt table. Adjust the positioning as needed to align the mounting holes. A minimum of two 1/4-20 x 5/8" fasteners must be used. Secure the enclosure to the tilt table.
7. Make all necessary electrical connections. Be sure to leave an adequate loop of cables between the enclosure and the pan/tilt, and the enclosure and the rigid mount to prevent binding and/or strain on the cables (see Figures 5 and 6).

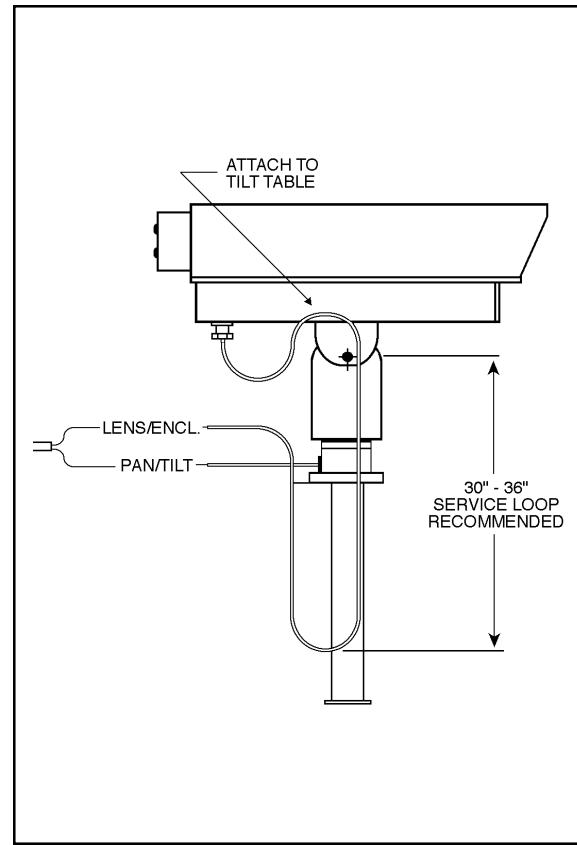


Figure 6. EH6500 Enclosure with Pan/Tilt and PM2000 Pedestal/Ceiling Mount

4.4 SUN SHROUD ASSEMBLY INSTALLATION (OPTIONAL)

The sun shroud provides air space between the sun shroud and the enclosure to protect from direct rays of the sun and reduces the internal temperature approximately 10-15°F (6°-10°C).

NOTE: Use the six (6) 10-32 x .375 Phillips head screws and nylon washers from the enclosure assembly.

To install the sun shroud, perform the following steps:

1. Unlatch the enclosure lid and raise.
2. Remove the six (6) screws from the enclosure lid (see Figure 7).
3. Align the screw holes in the sun shroud and enclosure lid.
4. Install the screws (and six SPA8467 spacers) as illustrated in Figure 7.

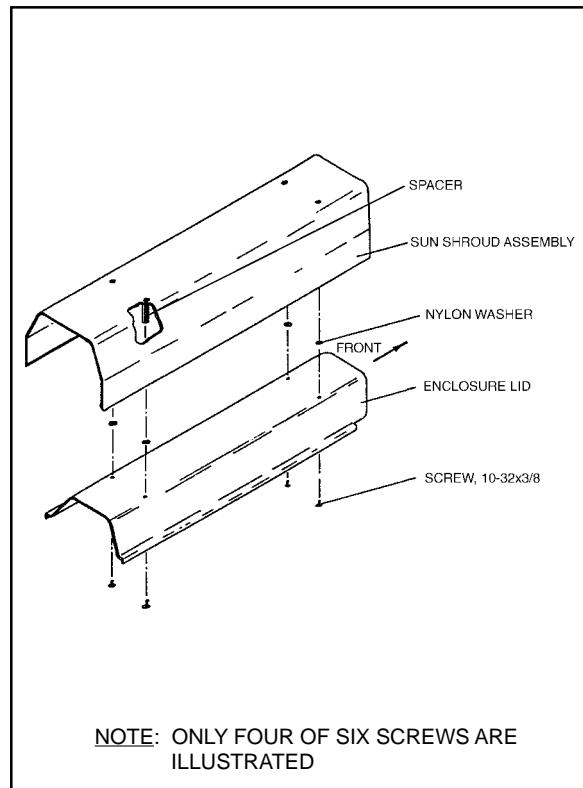


Figure 7. Sun Shroud Assembly Diagram

4.5 WW6500 WINDOW WASHER ASSEMBLY INSTALLATION (OPTIONAL)

The WW6500 window washer assembly is designed to allow the viewing window to be cleaned by a wiper and cleaning solvent which is pumped from a reservoir.

To install the WW6500 window wiper assembly, perform the following steps.

1. Open the lid of the enclosure.
2. Remove the two large hole plugs located in the bottom towards the front of the enclosure.
3. Remove the four (4) nuts/screws adjacent to the plugs removed above.
4. Place the WW6500 wiper box up to the front/bottom of the enclosure and align the four mounting holes of the above item with the four mounting holes in the WW6500 and pull the control wires through the holes opened by item 2 above. Then, using the four screws provided with the WW6500, connect the wiper box to the enclosure body.
5. Hard wire the purple wire exiting the wiper assembly to the wiper pump control wire.
6. Connect the white wire exiting the wiper assembly to terminal 27 of the circuit board.
7. Connect the blue wire exiting the wiper assembly to terminal 28 of the circuit board.
8. Connect the black wire exiting the wiper assembly to terminal 29 of the circuit board.
9. Close the lid.
10. Attach the wiper arm assembly to the wiper shaft on the front of the wiper box. The blade should be positioned to the left side of the window. Attach the wiper follower arm to the hex spacer to the left of the wiper shaft.
11. Attach the fluid bottle to the back of the air box on the rear of the enclosure. Connect the fluid tubing.

5.0 CARE AND MAINTENANCE

Maintenance performed at regularly scheduled intervals will help prolong the operational life and appearance of the equipment.

1. Clean the window with a mild nonabrasive detergent in water and a soft cloth regularly to help maintain picture clarity.
2. Clean or replace the fiberglass filter pad in the chin of the enclosure periodically. To replace or clean the filter pad, perform the following steps:

- a. Remove the two Phillips head screw and pull the filter assembly out of the enclosure for access to the filter.
- b. Remove the wire screen and filter pad. Clean the pad with water and mild detergent, dry thoroughly, and reinsert or replace with a new pad. (Replacement pads, part number EH550010045, are available from Pelco.)

6.0 WW6500 EXPLODED ASSEMBLY DIAGRAM

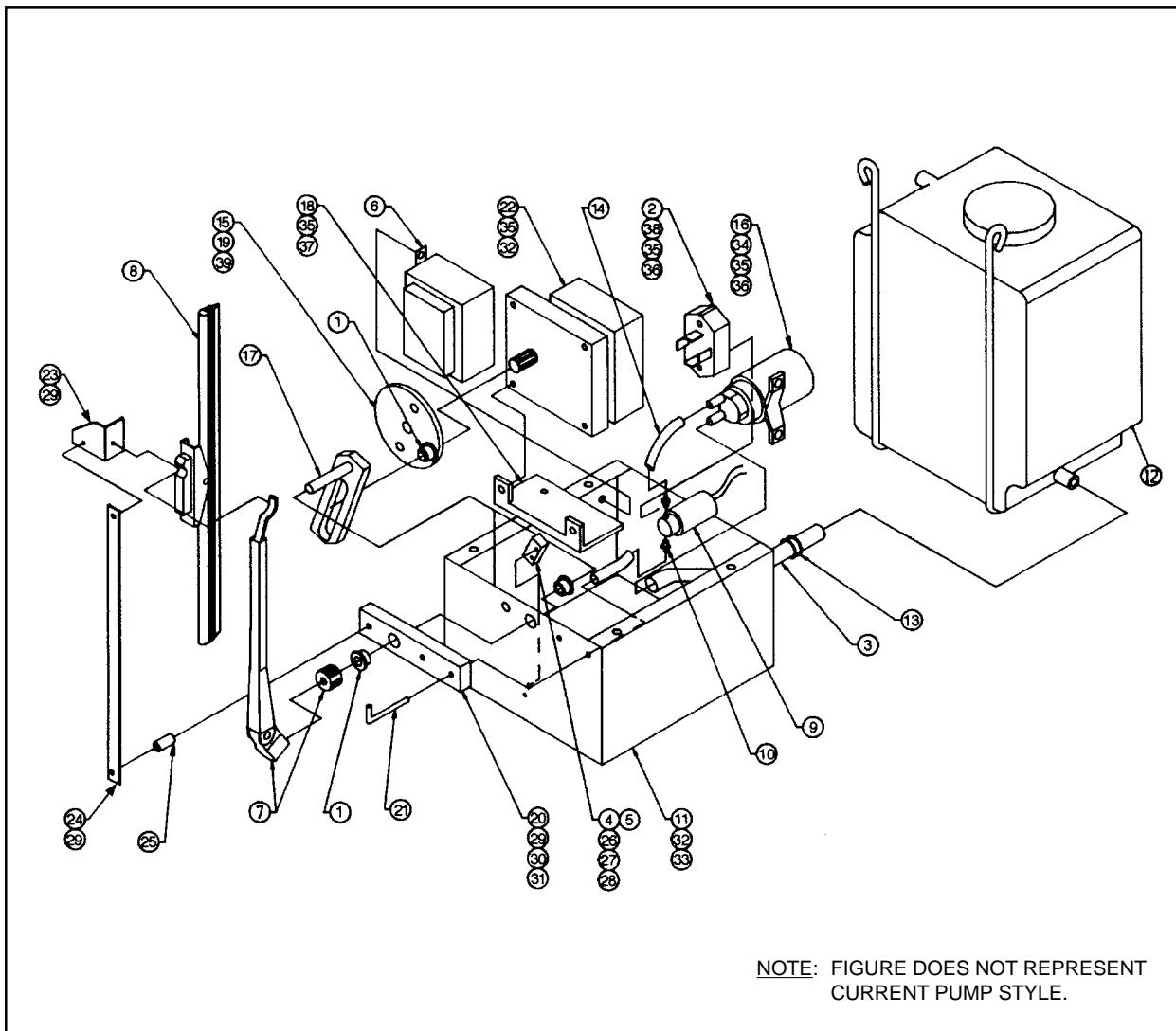


Figure 8. WW6500 Exploded View Assembly Diagram

7.0 WW6500 MECHANICAL PARTS LIST

Item	Qty	Description	Part Number
1	3	Bearing	776003
2	1	Diode, full brdg. rect., 8A 400V	DIOPT40F
3	3	Grommet 3/8" ID FOR 1/2" #2175	GRO2175
4	1	Switch	SWI1SM1
5	1	Switch actuator with insulator	SWIJS138B
6	1	UL transformer, PAC00 #14120	TRF21162.00.0CM
7	1	Arm, wiper, WW6500	WW650010000
8	1	Blade, wiper, WW6500, 9"	WW650010001
9	1	Valve, solenoid, 12V	WW650010010
10	2	Fitting, BARBXMNPT	WW650010020
11	1	Enclosure, wiper/washer, WW6500	WW65004000COMP
12	1	Bottle and cap, hanger	WW6610004
13	51	Tubing Vinyl 1/4 ID x 3/8 OD x inch	WW6610005
14	4	Tubing, vinyl 1/8 ID x 1/4 OD x inch	WW6610007
15	1	Pin dowel, SS 1/4 x .750	WW6610011
16	1	Pump, fluid, washer, 12VDC	WW 6610031
17	1	Wiper shaft/follower arm assembly	WW661011COMP
18	1	Bracket wiper motor	WW664001COMP
19	1	Roller plate	WW664009COMP
20	1	Bearing block	WW664010COMP
21	1	Tube spray	WW664015COMP
22	1	Motor, modified, wiper, 120 VAC	WW664017COMP
Not Shown	1	Motor, modified, wiper, 230 VAC	WW664020COMP
23	1	Clevis, wiper	WW65004024COMP
24	1	Arm, wiper, follower	WW65004028COMP
25	1	NP spacer, 1/4 hex x .500, 4-40 TAP	SPA8403
26	2	Screw, 2-56 x 3/4" phil pan SS	ZH2-56X.750SPS
27	2	Nut, hex 2-56 SS	ZH2-56NUTSH
28	2	Washer, internal star #2 SS	ZH2LWSIS
29	3	Screw, 4-40 x 3/8" pan phil SS	ZH4-40X.375SPP
30	1	Washer, lock #4, internal tooth SS	ZH4LWSIS
31	1	Set screw, 6-32 x 3/16" soc knur black	ZH6-32X.12SS
32	4	Screw, 8-32 x 5/8" pan phil SS	ZH8-32X.675SPP
33	4	Washer, internal star #8 SS	ZH8LWSIS
34	2	Screw, 10-32 x 1/2" pan phi SS	ZH10-32X.500SPP
35	8	#10 Internal tooth lockwasher SS	ZH10LWSIS
36	4	Nut, hex 10-32 SS	ZH10-32NUTSH
37	4	Screw, 10-32 x 3/8" pan phil SS	ZH10-32X.375SPP
38	2	Screw, 10-32 x 1" pan phil SS	ZH10-32X1.00SPP
39	1	Set screw, 10-32 x 3/16" soc knur black	ZH10-32X.1875

8.0 MODELS

EH6500-1 Enclosure, Environmental with 120V Heater and Blower

EH6500-2 Same as EH6500-1, except 24V

EH6500-3 Same as EH6500-1, except 230V

8.1 OPTIONAL ACCESSORIES

FACTORY INSTALLED

WW6500 Window wiper, 120 VAC

WW6500/220 Window wiper, 230 VAC

WD6500 Window defroster, 120 VAC, 75 vA

WD6500/220 Window defroster, 230 VAC

TI6500 Thermal insulation

LK6500 Tamper resistant lock kit for EH6500 Series

FIELD INSTALLED

SS6500 Sun shroud

8.2 RECOMMENDED MOUNTS

WM2000/

AH2000/ST1 Universal wall mount with AH2000 adjustable head and ST1 support strut. Supports up to 150 lbs (67.5 kg) as long as ST1 strut is used.

PM2000/

AH2000 Universal pedestal mount (24" high) with AH2000 adjustable head. Supports up to 125 lbs (56.25 kg).

NOTE: Fasteners to secure mounts are not supplied. (Minimum 1/4" diameter recommended.)

8.3 RECOMMENDED CABLE SIZE

CAUTION: When a single power source is used for both the camera and accessories, the camera power consumption must be taken into consideration when determining the wire gauge.

The following cable sizes are the minimum recommended for use with the combination of blower/heater/camera:

- 22 Awg to 200 feet (60.96 m)
- 20 Awg to 325 feet (99.06 m)
- 18 Awg to 550 feet (167.64 m)

8.4 POWER REQUIREMENTS FOR BLOWER, HEATER AND ACCESSORIES

The blower, heater and defroster require 24 VAC, 120 VAC, or 230 VAC, 50/60 Hz single phase power source. They use the following wattage when in operation:

- Blower: 25 watts
- Heater: 320 watts
- Defroster: 75 watts
- Wiper Assembly: 16.5 watts

9.0 SPECIFICATIONS

ELECTRICAL

Input Voltage: 24 VAC, 120 VAC, or 230 VAC
50/60 Hz

Electrical Connection: Two (2) 10-position terminal blocks

GENERAL

Cable Entry: Two cable entry boots and strain reliefs on bottom rear of enclosure conduit knockouts

Window: 0.375-inch (0.953 mm) Lexan

Camera Mounting: Removable camera sled with built-in elevation block

Maximum Camera/Lens Length: 29 in. (73.66 cm)

Maximum Camera/Lens Width: 10 in. (25.4 cm)

Maximum Camera/Lens Height: 13 in. (33.02 cm)

Construction: Aluminum

Finish: Polyester powder coat

Dimensions: See Figure 1

Weight: 42 lbs (18.9 kg)

10.0 WARRANTY AND RETURN INFORMATION

WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship for a period of one (1) year after the date of shipment. Exceptions to this warranty are as noted below:

- Two (2) years on all standard motorized and fixed focal length lenses.
- Two (2) years on Legacy®, Intercept®, CM6700/ CM8500/CM9500/CM9750/CM9760 Matrix, Spectra™, DF5 Series and DF8 Fixed Dome products.
- Two (2) years on WW5700 series window wiper (excluding wiper blades).
- Two (2) years on cameras.
- Six (6) months on all pan and tilts, scanners or preset lenses used in continuous motion applications (e.g., preset scan, tour and auto scan modes).

Pelco will warranty all replacement parts and repairs for 90 days from the date of shipment. All goods for warranty work shall be sent freight prepaid to our Clovis, California facility. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty. Pelco is not liable for any incidental or consequential expenses or liability incurred by the customer as a result of field repair, installation, or any other reason.

The above warranty is in lieu of any other expressed or implied warranty, condition, or guarantee by Pelco of the equipment listed herein. Pelco makes no warranties except for intended use and will not be liable for any loss, damage, or costs arising, whether consequential or incidental, from the use of said merchandise.

This warranty gives you specific legal rights. You may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, contact Pelco at (800) 289-9100 or (559) 292-1981 for a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, Sales Order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product which does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Ship freight prepaid to: Pelco
300 West Pontiac Way
Clovis, CA 93612-5699

Method of return shipment shall be the same as method by which the repair item is received by Pelco.

RETURNS

In order to expedite parts returned to the factory for repair or credit, please call the factory at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair). Goods returned for repair or credit should be clearly identified with the assigned CA/RA number and freight should be prepaid. All merchandise returned for credit may be subject to a 20% restocking and refurbishing charge.

Ship freight prepaid to: Pelco
300 West Pontiac Way
Clovis, CA 93612-5699